

(No Model.)

J. A. HINSON.

CAR COUPLING.

No. 368,337.

Patented Aug. 16, 1887.

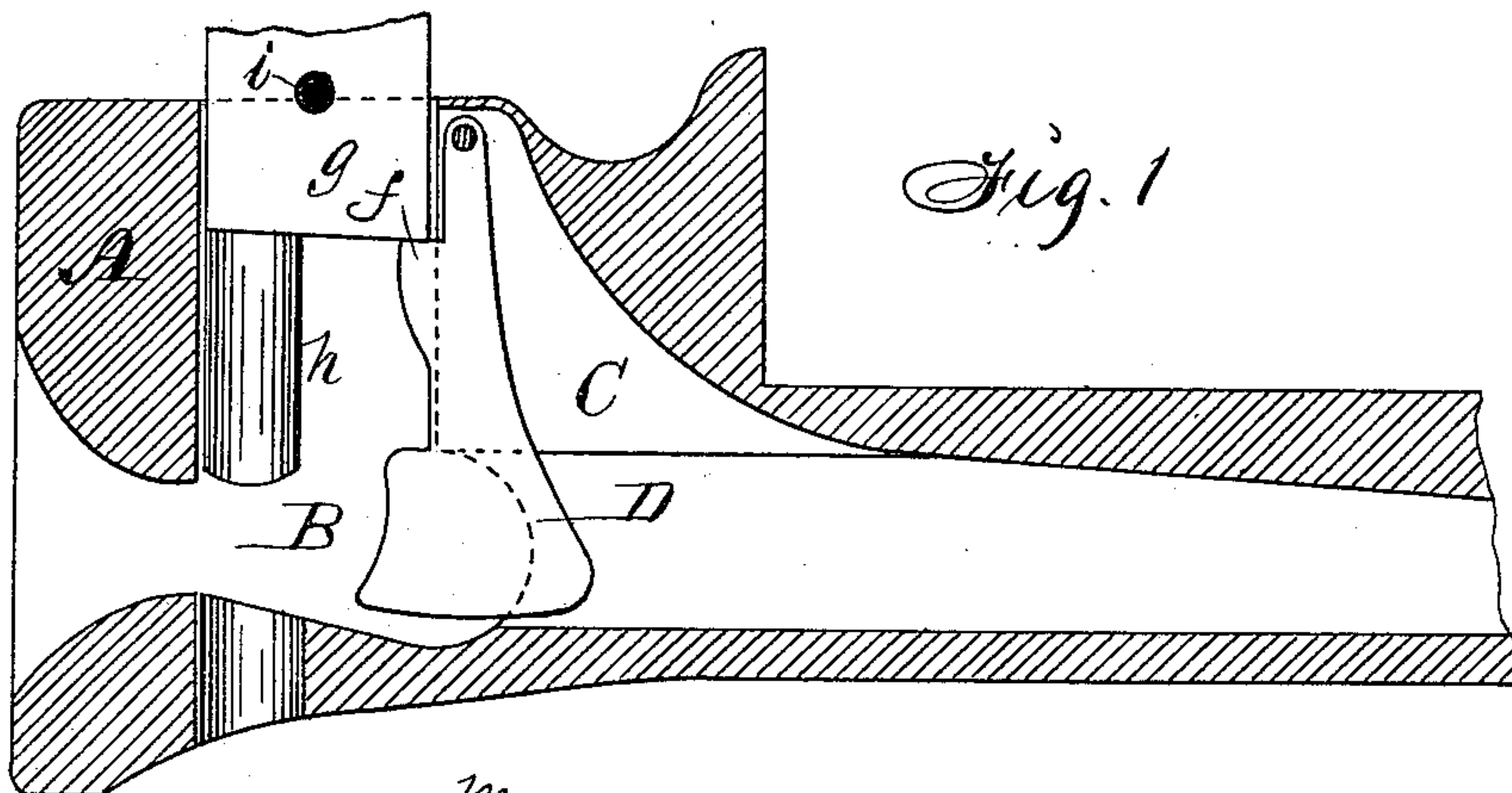


Fig. 1

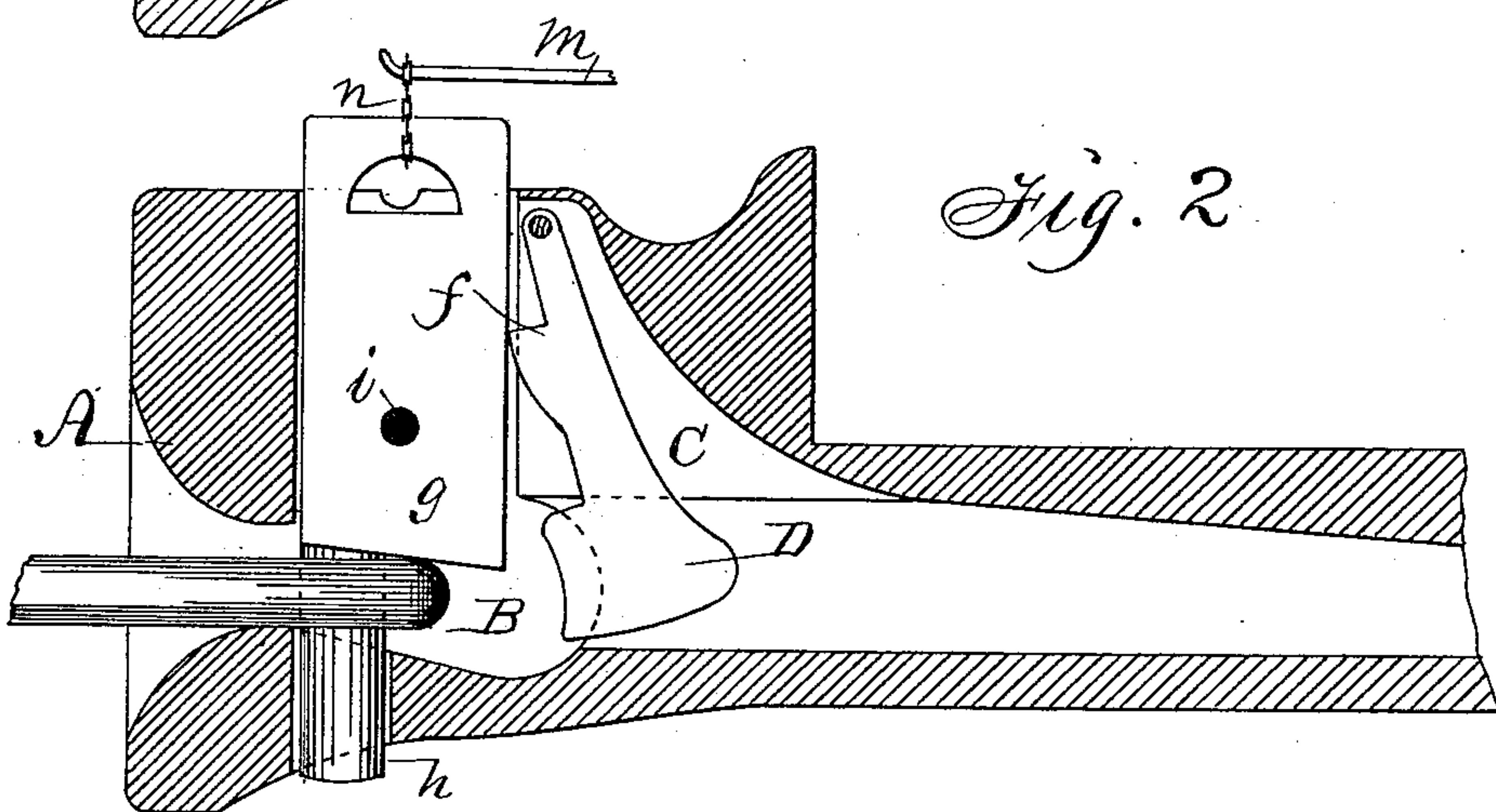


Fig. 2

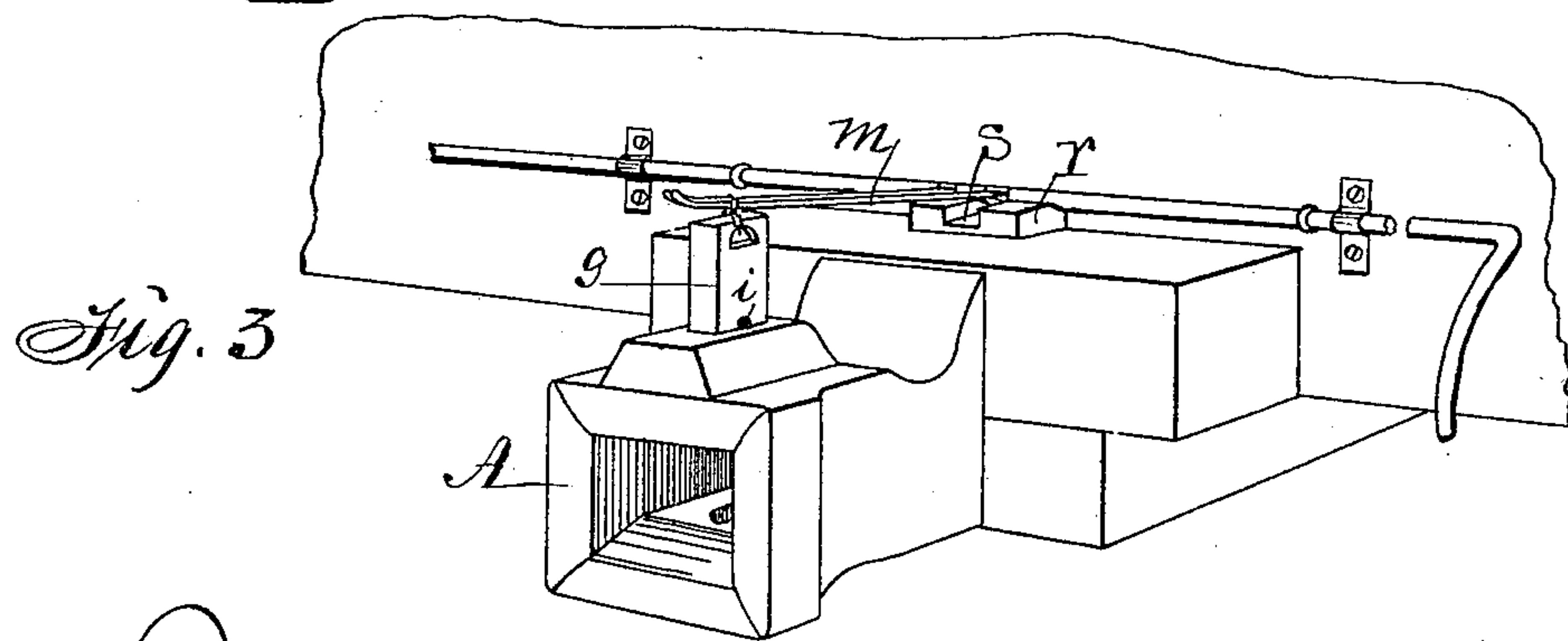


Fig. 3

Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES A. HINSON, OF DES MOINES, IOWA, ASSIGNOR TO THE HINSON
AUTOMATIC CAR COUPLER COMPANY, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 368,337, dated August 16, 1887.

Application filed December 13, 1886. Serial No. 221,456. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. HINSON, a citizen of the United States of America, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented an Improved Automatic Car-Coupling, of which the following is a specification.

My object is, first, to form and combine a pin and a pin-support with a draw-head in such a manner that the pin can be retained elevated, as required, to admit a link of common form to enter the draw-head and to operate the pin-support, as required, to allow the pin to drop and engage the link, and also in such a manner that the pin can be readily retained inoperative whenever desired by simply inserting a minor pin; second, to combine a rock-shaft and a shaft locking and supporting device with a car in such a manner that the coupling-pin and coupling-link in the draw-head can be manipulated therewith by a person at the side of a car to direct a link to enter a mating draw-head, also as required to lift the pin to uncouple, and also in such a manner that the shaft can be moved longitudinally to retain the coupling-pin inoperative whenever desired.

I accomplish the results contemplated, as hereinafter set forth and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view of a draw-head, showing the pin-support combined therewith and in its normal position supporting a coupling-pin in an elevated position. Fig. 2 is a corresponding view showing the pin-support disengaged from the coupling-pin that has dropped and engaged a coupling-link. Fig. 3 is a perspective view representing the draw-head and a rock-shaft and my shaft-locking device fixed to a car, as required, for practical use.

A is a draw-head, that has a link-cavity, B, an angular pin-hole extending upward from the link-cavity, a circular pin-hole extending downward, and a triangular-shaped slot, C, extending upward and rearward.

D is a pin-support, pivoted in the slot C in such a manner that in its normal condition it will be suspended in a perpendicular position, as shown in Fig. 1. A shoulder, *f*, at the front

edge and top portion of this device D engages the bottom of the angular part *g* of the coupling-pin, as required, to retain the smaller and lower portion, *h*, of the pin elevated. A concave on the front face of the enlarged lower end of the same device is engaged by the end of a link when it enters the link-cavity, in such a manner that the pin-support will be forced backward by the impact of the link and disengaged from the coupling-pin, as shown in Fig. 2, and as required to secure the link and automatically couple two cars together. A transverse hole, *i*, in the angular part *g* of the coupling-pin admits a minor pin to be inserted when the coupling-pin is elevated, to retain the pin inoperative, as required, to prevent coupling whenever desired.

J is a rock-shaft secured in bearings fixed to the end of the car in such a manner that it can be moved longitudinally. It is provided with handles at its ends, by means of which it can be rocked, and has an arm, *m*, at its center, that projects forward and through under a chain, *n*, that is attached to the top of the coupling-pin, as shown in Fig. 2, or in any suitable way to flexibly connect it with the coupling-pin in such a manner that the pin can be raised and lowered by the movements of the shaft, and also pressed upon the end of a link in the link-cavity, to manipulate the link, as required, to direct its free end into a mating draw-head when two cars come together on a track and are to be coupled together.

r represents my shaft locking and supporting device in the form of a block having a slot, *s*, fixed to the car under the center of the shaft in any suitable way, so that the arm *m* can be readily moved in and out of the slot *s*. When the arm is in the slot, the shaft is thereby locked, as required, to prevent longitudinal movement thereof, and when it is raised out of the slot and the shaft pushed or pulled a small space in either direction the arm can be allowed to rest upon the supporting-block, as shown in Fig. 3, and the coupling-link suspended at its free end retained in an elevated and inoperative position.

I am aware that a trigger provided with a notch near its top end has been pivoted in a draw-head in such a manner that the notched

top would vibrate to and fro relative to a curved pin to engage a projection on the pin for the purpose of supporting the pin elevated, so that a link could pass the bottom of the pin and press back the lower end of the trigger, and at the same time throw the top of the trigger and the top of the curved pin forward and cause the pin to drop through the link to couple the cars together.

10 I am also aware that a round coupling-pin has had an angular extension at its top portion to engage a tumbler in the draw-head as a means of support when elevated, and to engage a link when depressed, as required, to
15 elevate the free end of the link.

I am also aware that a rock-shaft has been provided with an arm and a longitudinal movement for the purpose of placing the arm on a fixed projection to retain the arm and a coupling-pin connected therewith elevated, as required, to prevent coupling; but my manner of constructing and suspending a pin-support in a draw-head to engage and support a straight pin is novel and advantageous.

25 I claim as my invention—

1. An automatic car-coupling comprising a draw-head having an angular pin-hole, a link-cavity, and a vertical slot or cavity in rear of said pin-hole intersecting the pin-hole and also

the link-cavity, a pin-support having a shoulder or projection on its front edge pivoted in said vertical slot or cavity, and an angular pin having a smaller extension at its bottom, and mechanism for raising and lowering said pin, all constructed and combined to operate in the
35 manner set forth.

2. The draw-head A, having cavities B and C, an angular pin-hole in its top portion and a minor pin-hole in its lower portion, a pin-support, D, having a shoulder, *f*, a pin having
40 an angular top portion, *g*, and minor lower portion, *h*, and transverse pin-hole *i*, constructed and combined substantially as and for the purposes set forth.

3. The draw-head A, having cavities B and C, and an angular pin-hole intersecting said cavities, a pin-support, D, having a shoulder or projection, *f*, a pin having an angular top portion, *g*, and an extension, *h*, at its bottom, a rock-shaft, J, having an arm, *m*, and a locking and supporting device, *r*, having a slot, *s*,
50 arranged and combined with a car, substantially as set forth, for the purposes stated.

JAMES A. HINSON.

Witnesses:

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